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30 January 1957

CMCC Doc. No. 151X5.403

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Dear Dick:

We are forwarding herewith eight copies of Monthly Progress Letter No. 7, covering work performed on System No. 4 during the period extending from 1 December 1956 to 1 January 1957.

Sincerely,

Burt

Burt

Enclosures:

CMCC Doc. No. 163X5.29

Copies 1-8 of 12

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Monthly Progress Letter No. 7

Contract No. A-101

System 4

1 December 1956 to 1 January 1957

CMCC Document No. 163X5.29

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(This document contains a total of 4 sheets,
including this title sheet.)

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1. General

During the period covered by this progress letter:

- (1) All antennas diverted for other usage were replaced.
- (2) Fabrication of all subassemblies for the receiving equipment was completed.
- (3) Wiring of tuner assemblies for receiving equipment was completed or well advanced.
- (4) The packaging of the prototype tape transport was considerably advanced.
- (5) Fabrication of cards for the prototype camera-indicator equipment was almost completed.

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3. Receiving Equipment

- a. Most of the wiring of the main chassis for band I was completed. The design for the tuning heads was completed and shop work initiated.
- b. Wiring of the main chassis for bands II through VII was either considerably advanced or completed. Wiring-harness diagrams were made up to facilitate this job during the

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production phase. All mechanical parts such as gear trains and housings were completed and incorporated into the tuners.

c. The design of the c-w capability for bands VIII through X is still underway. It is probable that optimum sensitivity will not be achieved in the prototype model because of the problems involved in reducing hum below the microvolt level.

d. During this period some basic design changes in the system were recommended by the customer. Most of the changes requested were intended to represent a simplification and an increase in reliability of the system. These changes involved simplification of the lock-on process, eliminating the pulse stretcher and using audio filter techniques, as well as the basic antenna changes mentioned under paragraph 2. The recommendation was made that none of the design changes requested in the receiving equipment be effected in the prototype, and that these changes be incorporated in the production equipment only after feasibility had been established.

4. Camera/Indicator

a. Tests were performed to provide an over-all check of video recording equipment performance. This involved an over-all test of the camera/indicator and video programming equipments. Minor difficulties were encountered and changes in logic were required to correct these in the breadboard version of the indicator and video equipment.

b. Most of the cards for the prototype were completed and fabrication and wiring of the harness for the camera/indicator was initiated.

c. The design of the 400-foot magazine was completed and shop work was initiated.

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5. Programming Equipment

All basic design on both audio programming and video programming is completed and most of the prototype cards have been fabricated.

6. Tape Transport

Material required by the tape transport was acquired in sufficient quantity to permit fabrication of the prototype in the shop without dismantling the lab breadboard. Shop work was started about the middle of this period.

7. Power Supply

All of the component parts for the power supply were delivered from the vendors except those required for the indicator high-voltage supply. Construction of the power supply is nearing completion.

8. Planning

As indicated in Progress Letter No. 6, a prototype system was scheduled to be completed during this reporting interval. However, because of delays in part deliveries, the prototype system is now scheduled to be completed during the next reporting interval, with flight testing scheduled for a date as close to 1 February 1957, as possible.

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